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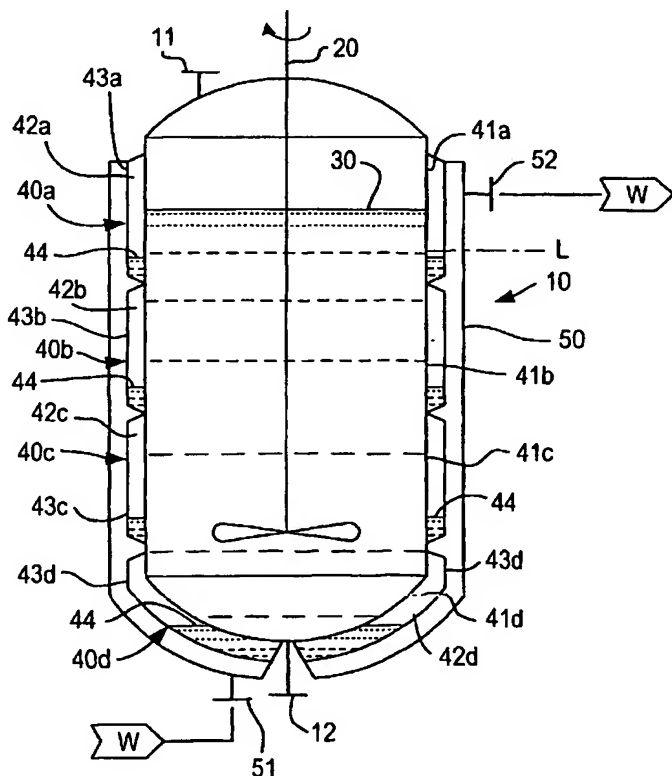
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[Continued on next page]

(54) Title: MULTIPHASE POLYMERIZATION REACTOR



(57) Abstract: A polymerization reactor (10) comprises a heat pipe jacket (44) for the removal of large heat fluxes and capable of maintaining essentially isothermal conditions without the use of complicated and maintenance intensive circulation heat exchangers or internal coils. This isothermal reactor (10) is useful particularly when polymerization is conducted in multiphase system and/ or when the rate of reaction is high and when consistent polymer properties are desired.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US02/41770

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : F28D 7/00, 7/10, 15/00, 15/02

US CL : 422/131, 138, 198, 202, 206; 165/104.14, 154, 168, 169

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 422/131, 138, 198, 202, 206; 165/104.14, 154, 168, 169

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,667,758 A (MATSUGI et al) 16 September 1997 (16.09.1997), figures 1, 2 and 7-9 and column 5, lines 14-27.	1-6
X	US 4,667,730 A (ZEMP) 26 May 1987 (26.05.1987), figures 1 and 2 and column 4, line 64- column 5, line 2.	1, 7-8
A	US 5,071,627 A (CHILD et al) 10 December 1991 (10.12.1991).	1-8

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

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"P" document published prior to the international filing date but later than the priority date claimed

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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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"&" document member of the same patent family

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INTERNATIONAL SEARCH REPORT

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Continuation of B. FIELDS SEARCHED Item 3:

EAST

search terms: heat pipe, heat exchange, jacket, reactor, condenser, thermosyphon